

REMARKS

Claims 1-24 are all the claims pending in the application. Claims 1-5 and 7-24 are rejected. Claim 6 is objected to but would be allowable. Claims 1, 4-6, 9, 16-21 and 24 are amended. Claims 2, 3, 11, 12 and 22 are cancelled.

Support for Amendments

The amendments include: (i) adding into claims 1 and 24 the features of existing claim 3; (ii) cancelling claims 11, 12 and 22; (iii) reformulating claims 16 to 18 as method claims dependent on claim 15; and (iv) reformulating claims 19 to 21 as method claims dependent on claim 1 (via claim 19 in the case of claims 20 and 21).

Claim Rejections - 35 USC § 102

Claims 1-5, 7-9, 11-18, 23, and 24 are rejected under 35 U.S.C. 102(b) as being anticipated by Hirsch et al (5,192,581). This rejection is traversed for at least the following reasons.

Amended Claims 1 and 24

Claim 1 has been amended to incorporate the limitations of claims 2 and 3, and now recites that (1) the catalyst material is deactivatable by heating and that (2) an irradiative technique is used to selectively heat selected regions of the first layer to pattern the first layer into active and non-active regions. However, the Examiner rejected claims 2 and 3 as being anticipated by Hirsch et al '581. Applicants respectfully submit that Hirsch et al '581 does not disclose the key limitations from the two claims.

Claim 24 has had similar amendments made, and is therefore distinguishable from Hirsch et al '581 for the same reasons.

Hirsch et al '581

In supporting the rejection of original claim 3, the Examiner has made specific reference to claim 26 of Hirsch et al '581.

First, claim 26 in Hirsch et al '581 does not have a teaching that is enabling, but only recites steps without any technical support. Critical limitations or exceptions to the recited steps

are not included in the bare claim and, thus, does not offer Applicants the opportunity to address the art fully in response to the rejection.

Second, even if claim 26 of Hirsch et al '581 is enabling, in that it describes a technique in which a laser beam triggers the deposition of a catalyst (complexing) material, such that catalyst material is only deposited on those portions of the substrate that are irradiated by the laser beam, the technique is opposite to the techniques of amended claims 1 and 24 of the present application.

Specifically, in the present invention, a catalyst material is deposited on a substrate in both regions where metal is to be deposited and metal is not to be deposited, and then the deposited catalyst material is selectively irradiated in those regions where metal is not to be deposited.

Hirsch does not deposit catalyst material in regions where metal is not to be deposited.

Claims 2-5, 7, 8, 11-18 and 23

First, with respect to claims 2, 3, 11 and 12, the rejection is moot in view of the cancellation of the claims.

Second, with respect to claims 4, 5, 7-9, 13-18 and 23, the rejection is overcome because of the dependency of these claims on amended independent claim 1, for the reasons already given.

Claim 9

First, claim 9 is patentable for the reasons given for parent amended claim 1.

Second, with regard to the stated basis for the rejection of claim 9 at section 2 of the Office Action, Applicants could find no disclosure at the cited claim 26 of Hirsch et al '581 of depositing the catalyst (complexing) material of Hirsch et al '581 on selected locations of the substrate to form coarse zones, and then using the irradiative technique to pattern the coarse zones.

Applicants' understanding of the technique described in cited claim 26 of Hirsch et al '581 is that the techniques described there rely solely on an irradiative technique to provide a catalyst pattern.

By direct and clear contrast, claim 9 is directed to the use of an effective sequence of selective deposition and irradiative techniques to achieve a catalyst pattern.

Claims 1-5, 7-9, 11-18, 23, and 24 are rejected under 35 U.S.C. 102(b) as being anticipated by Hirsch et al (5,084,299). This rejection is traversed for at least the following reasons.

Amended Claims 1 and 24

The content of amended claims 1 and 24 with respect to the features of claims 2 and 3 that have been added, already was described.

Hirsch et al '299

In framing the rejection of original claim 3 in the Office Action, Applicants note that the Examiner has made specific reference to claim 8 of Hirsch et al '299. Applicants' understanding of claim 8 is that it outlines a technique in which irradiation is used to reduce the etching rate of a coating of a polymer-seed metal mixture selectively in those regions in which metal is to be deposited, so that the polymer-seed metal mixture remains in the irradiated regions after a later chemical etching step. Again, this technique involves irradiating those regions in which metal is to be deposited. This technique is the opposite of the technique of amended claims 1 and 24 of the present application, i.e. a technique involving selectively irradiating those portions in which metal is not be deposited.

Claims 2-5, 7-9, 11-18 and 23

First, with respect to claims 2, 3, 11 and 12, the rejection is moot in view of the cancellation of the claims.

Second, with respect to claims 4, 5, 7-9, 13-18 and 23, the rejection is overcome because of the dependency of these claims on amended independent claim 1, for the reasons already given.

Third, with regard to the stated basis for the rejection of claim 9 at section 3 of the Office Action, Applicants could find no disclosure at the cited claim 8 of Hirsch et al '299 of depositing the polymer-seed metal mixture of Hirsch et al '299 on selected locations of the substrate to form coarse zones, and then using the irradiative technique to pattern the coarse zones.

Applicants' understanding of the technique described in cited claim 8 of Hirsch et al '299 is that the techniques described there rely solely on an irradiative technique to provide a catalyst pattern.

By direct and clear contrast, claim 9 is directed to the use of an effective sequence of selective deposition and irradiative techniques to achieve a catalyst pattern.

Claim Rejections - 35 USC § 103

Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hirsch et al (both the '299 and the '581) in view of either Esrom et al (EP 484808) or Chen et al (6,461,678). This rejection is traversed for at least the following reasons.

For the rejection of claim 10. Applicants respectfully submit that claim 10 is dependent on claim 9 and the comments for claim 9 above therefore apply equally to claim 10.

Accordingly, the rejected claim should be allowable.

Claims 19-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Okubi et al (4,830,880). This rejection is traversed for at least the following reasons.

Claims 19 to 21 are now all dependent directly or indirectly on claim 1, and the comments for claim 1 above therefore apply equally to claims 19 to 21 of the amended set of claims.

Accordingly, the rejected claims should be allowable.

Claim 22 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hirsch et al (299 or '581) in view of Okubi et al. This rejection is moot in view of the cancellation of the claim.

Allowable Subject Matter

Claim 6 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claim 6 still should be allowable as it now depends from claim 1, which has been amended to incorporate the limitations of claim 3. However, Applicants respectfully submit that claim 1 is patentable for the reasons given, and that claim 6 need not be placed into independent form.

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,

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Date: July 9, 2010